

FIGURE 1

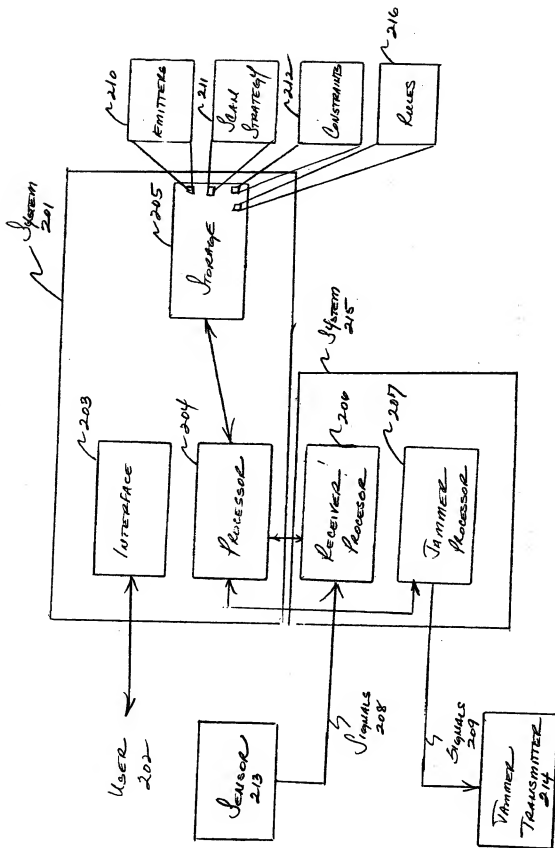
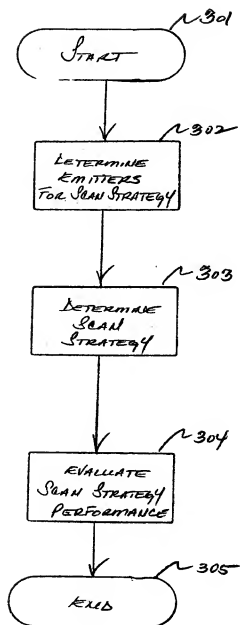


Figure 2



PROCESS
300

FIGURE 3

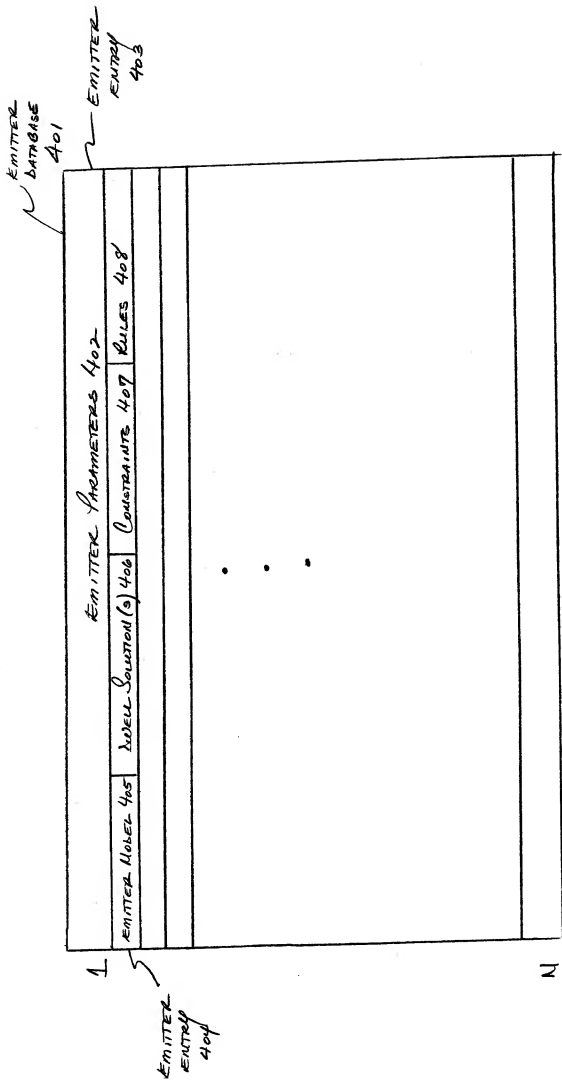


Figure 4

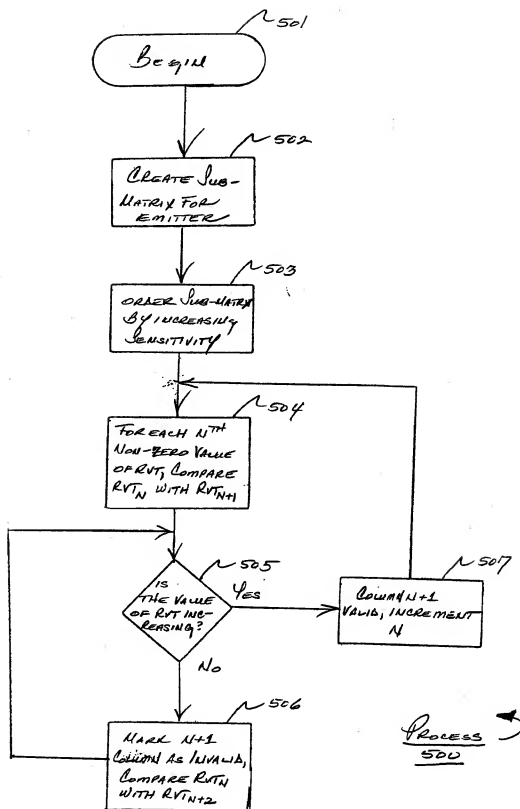


FIGURE 5

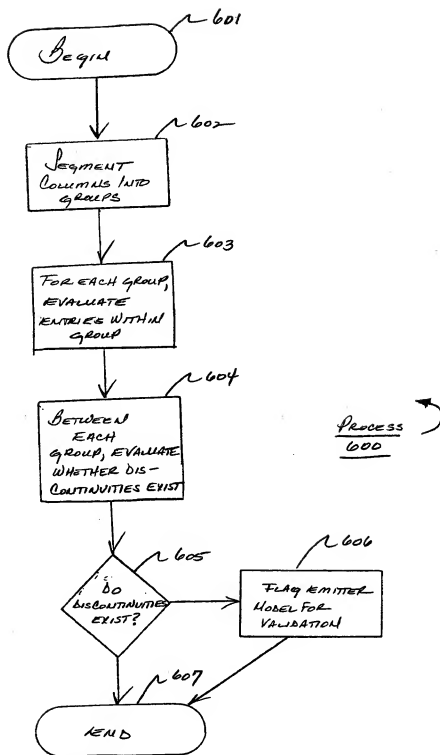


FIGURE 6

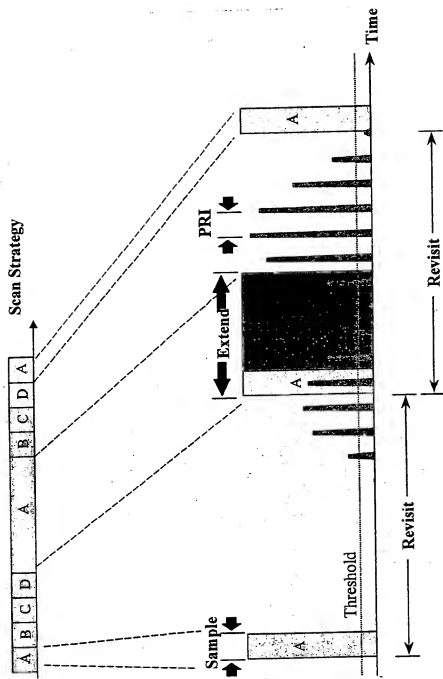
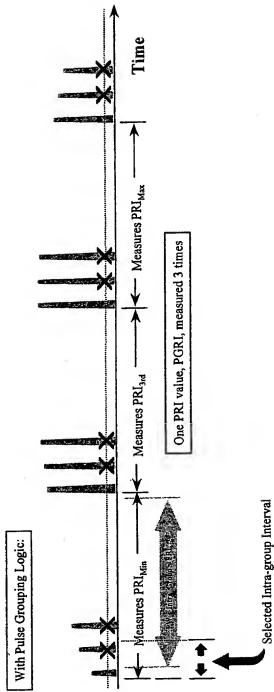
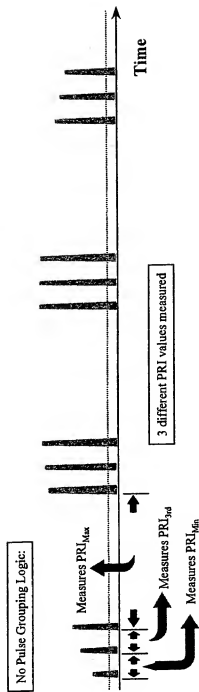


Figure 17



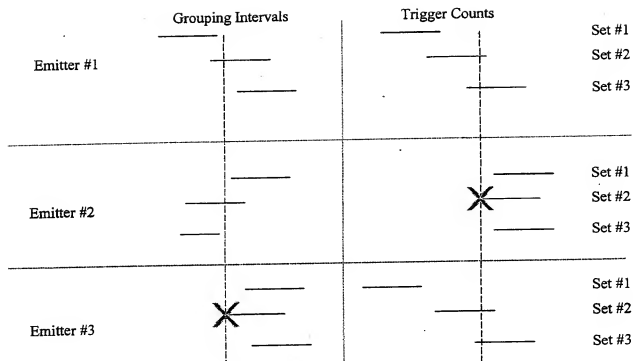


FIGURE 9



Figure
104

Discrete Illuminations (TIBS)



Figure
108

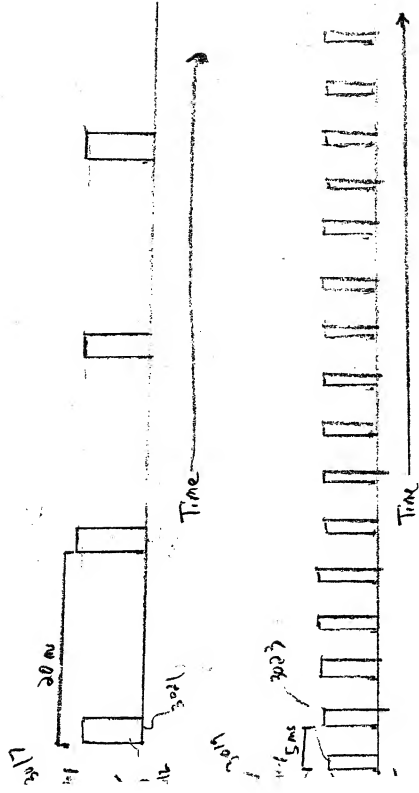
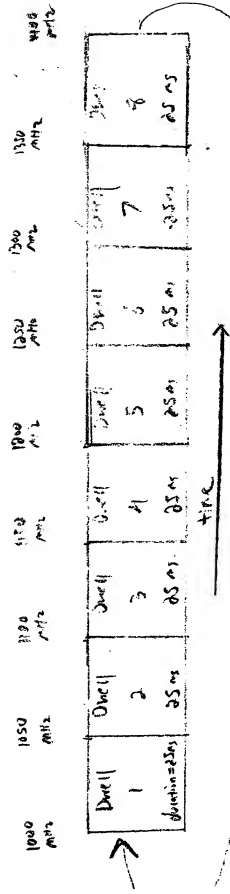
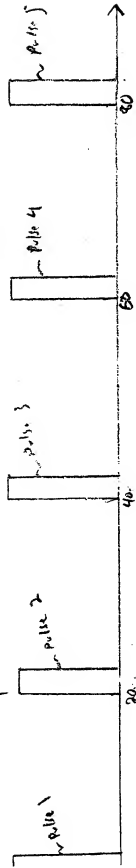


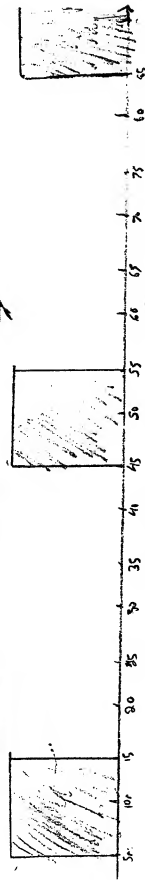
Figure 11

PRI = 20ns



Emitter 3101

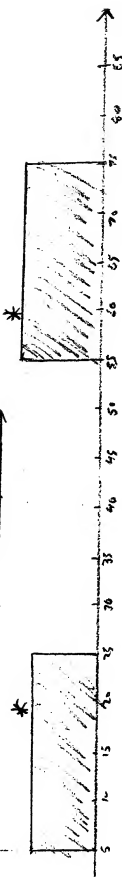
Time (ms)



Solution 1

Drill Duration = 13ms
Reset Time = 40ms

Time (ns)



Solution 2

Drill Duration = 20ns
Reset Time = 50ns

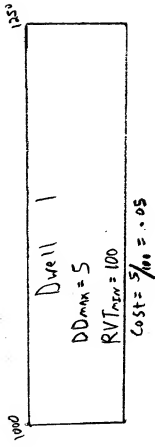
Time (ns)

Figure 1b

4000

| Emitter name | RF Max (MHz) | RF Min (MHz) | RF Max (MHz) | RF Min (MHz) | MDT (ms) |
|-----------------|--------------------|--------------------|--------------------|--------------------|-------------|
| E1 | 100 ns | 850 ns | 1000 | 1300 | 3 |
| E2 | 100 ns | 780 ns | 1220 | 1350 | 5 |
| E3 | 110 ns | 330 ns | 1510 | 1910 | 2 |
| E4 | 130 ns | 390 ns | 1730 | 1860 | 4 |

Figure B



Solution 1

| | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1270 |
|--|---------|---------|---------|---------|---------|---------|---------|
| Dwell 1 | Dwell 2 | Dwell 3 | Dwell 4 | Dwell 5 | Dwell 6 | Dwell 7 | Dwell 8 |
| DDmax | DDmax | DDmax | DDmax | DDmax | DDmax | DDmax | DDmax |
| 3 | 3 | 3 | 3 | 3 | 3 | 5 | 5 |
| RVTmax | RVTmax | RVTmax | RVTmax | RVTmax | RVTmax | RVTmax | RVTmax |
| 650 | 650 | 650 | 650 | 650 | 650 | 650 | 650 |
| Cost | Cost | Cost | Cost | Cost | Cost | Cost | Cost |
| $\frac{5}{1000} + \frac{5}{1050} + \frac{5}{1100} + \frac{5}{1150} + \frac{5}{1200} + \frac{5}{1250} + \frac{5}{1270}$ | | | | | | | |

Solution 2

$\frac{31}{31} \approx 0.48$

Figure 14A

1510

1760

Due 11 1

DDmax = 4 ns

RVTime = 330 ns

$$\text{Cost} = \frac{4}{330} = .012$$

Solution 1

1510 1540 1570 1600 1630 1660 1690 1720 1750 1780

| | | | | | | | | | |
|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Due 11 1 | Due 11 2 | Due 11 3 | Due 11 4 | Due 11 5 | Due 11 6 | Due 11 7 | Due 11 8 | Due 11 9 | Due 11 10 |
| DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 | DDmax 2 |
| RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns | RVTime 330 ns |

$$\text{Cost} = \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} + \frac{4}{330} = \frac{40}{330} = .121$$

Solution 2

Figure 14B

Figure 15

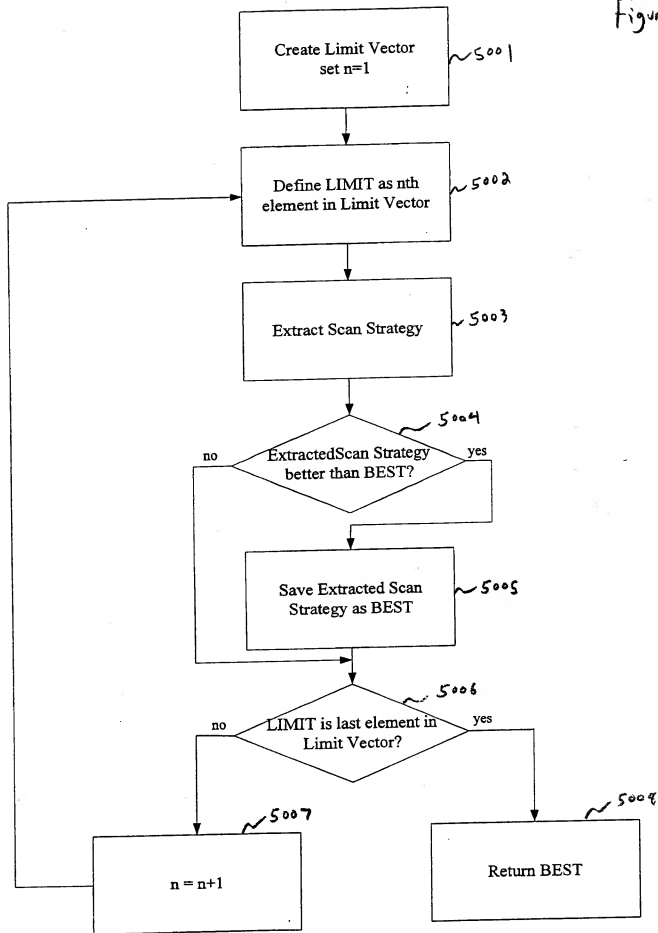
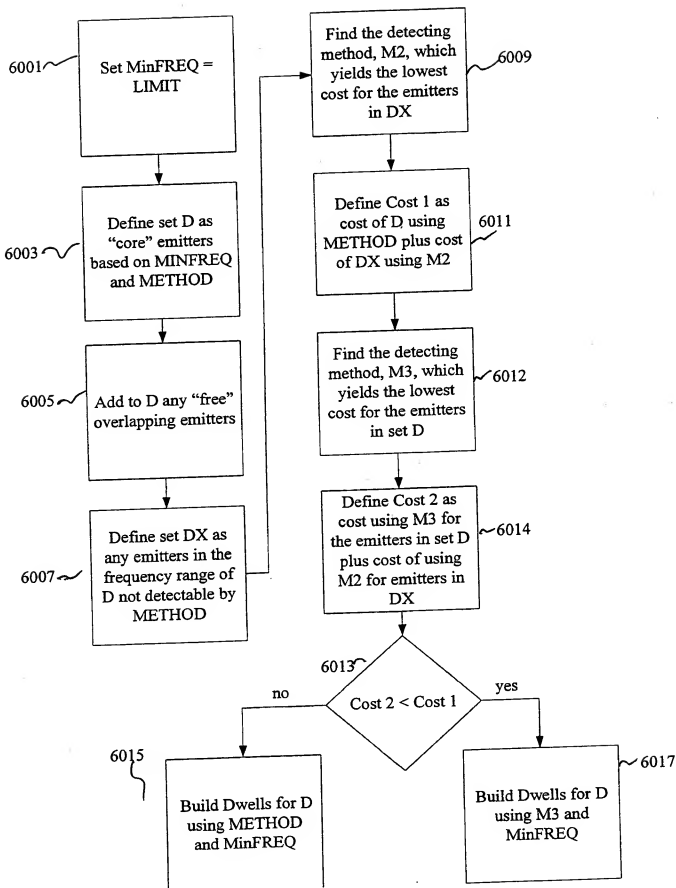


Figure 16



| Name | RF Min | RF Max |
|------|--------|--------|
| E1 | 1100 | 1200 |
| E2 | 1150 | 1250 |

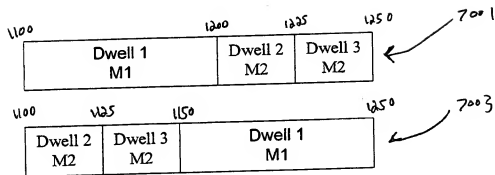
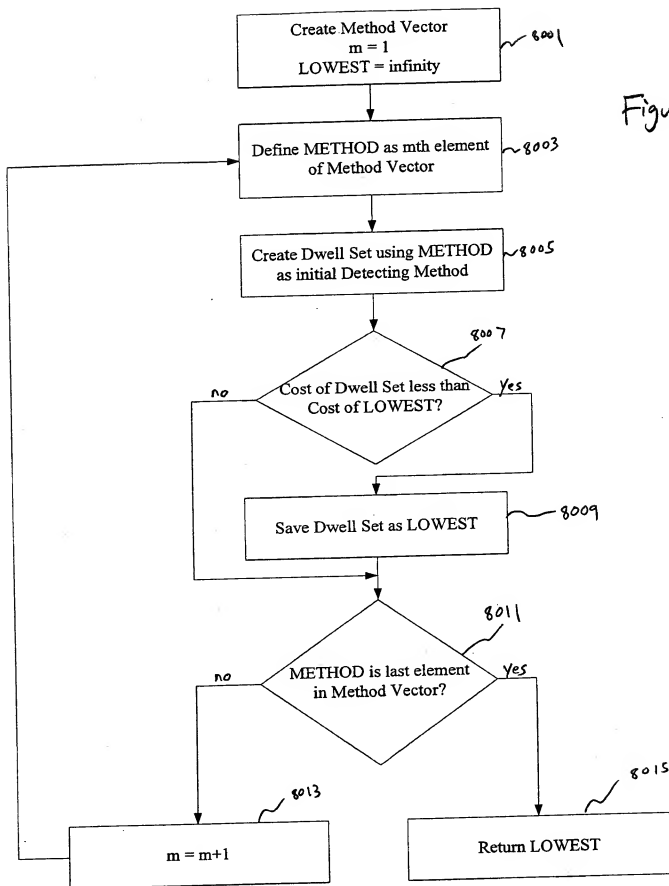


Figure 17

Figure 18



| Emitter | Dwell Duration (ms) | Revisit Time (ms) |
|-----------|---------------------|-------------------|
| Emitter 1 | 1 | 500 |
| Emitter 2 | 2 | 1200 |

Figure 19

| Emitter | Dwell Duration (ms) | Revisit Time (ms) | Cost |
|-----------|---------------------|-------------------|------|
| Emitter 1 | 1 | 500 | .002 |
| Emitter 2 | 5 | 1000 | .005 |

Figure 20

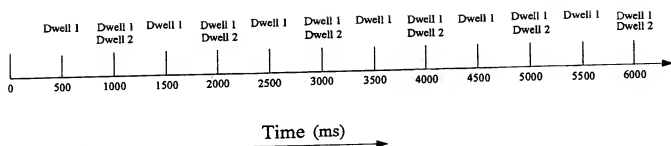


Figure 21

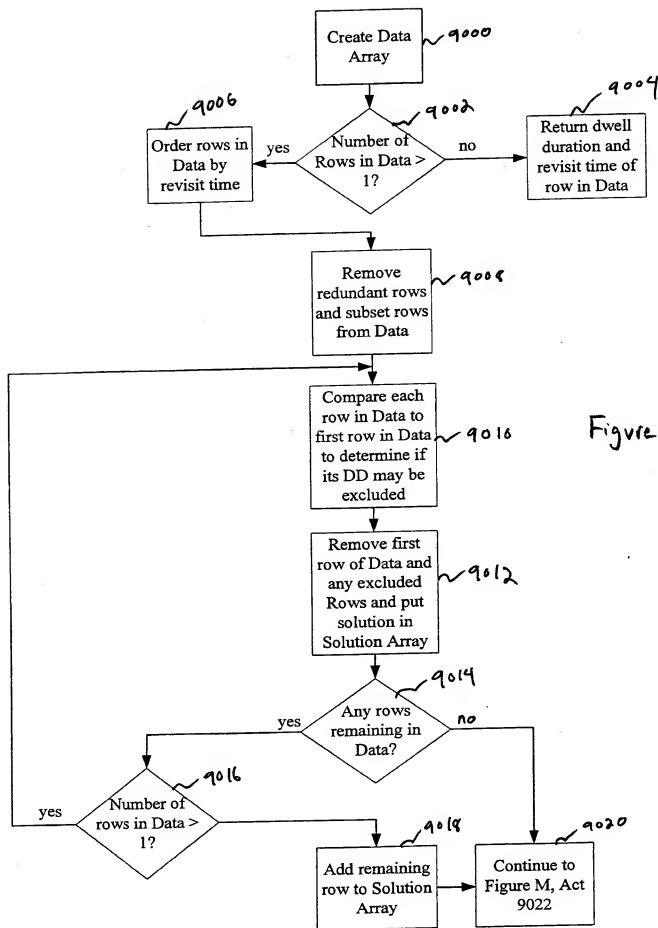


Figure 22

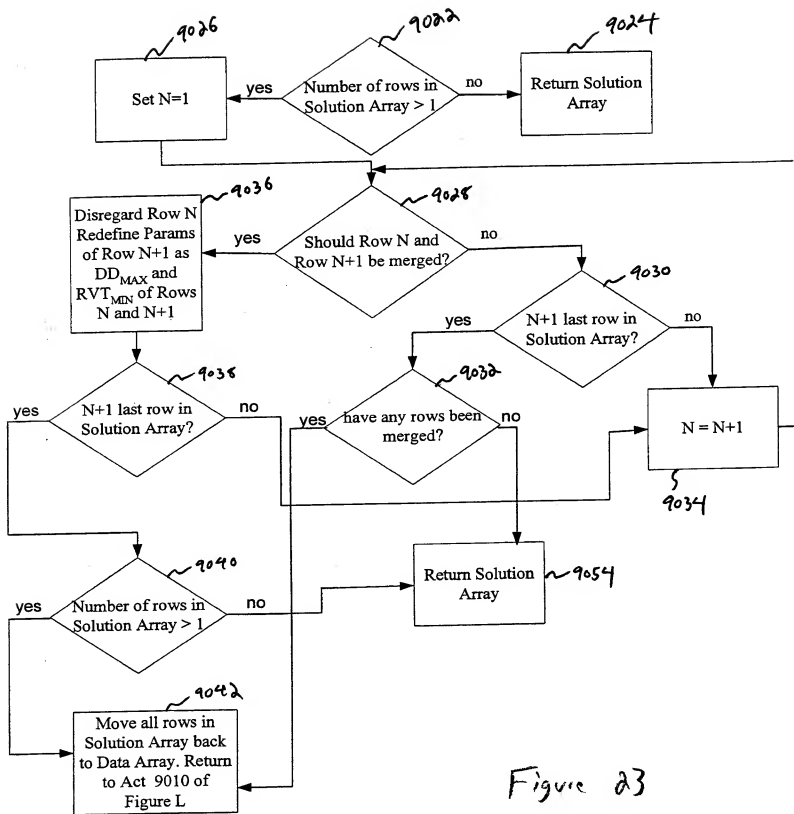


Figure 23

9044

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 3.05 | 17 | 2868 |
| 3 | 19 | 2000 |
| 3 | 19 | 2000 |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 0.5 | 3.5 | 1000 |

Figure 24A

9044

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 0.5 | 3.5 | 1000 |
| 3 | 19 | 2000 |
| 3 | 19 | 2000 |
| 3.05 | 17 | 2868 |

9048
9049
9050

Figure 24B

9051
9052

| Data | | |
|------|-----|------|
| MDT | EDT | RVT |
| 1 | 7 | 500 |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |
| 3 | 19 | 2000 |
| 3.05 | 17 | 2868 |

Figure 24C

9044

| Data | | |
|------|-----|-----|
| MDT | EDT | RVT |
| 2 | 9 | 700 |
| 2.3 | 11 | 800 |

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |

Figure 24D

9044

| Data | | |
|------|-----|-----|
| MDT | EDT | RVT |

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |
| 2 | 11 | 700 |

Figure 24E

9046

| Solution | | |
|----------|-----|-----|
| MDT | EDT | RVT |
| 1 | 19 | 500 |
| 2 | 11 | 700 |

Figure 24F

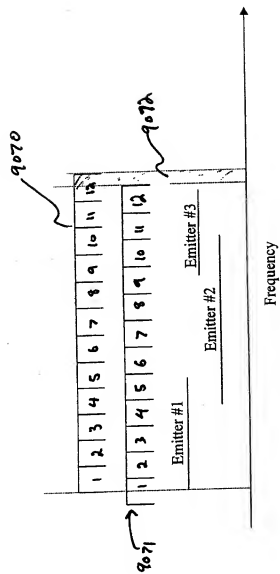


Figure 25

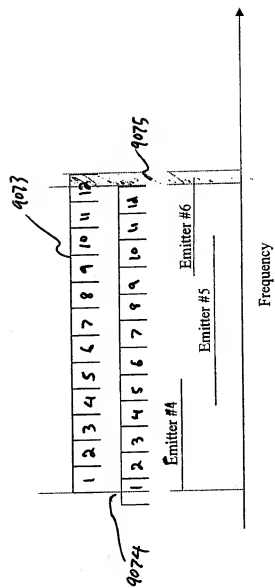


Figure 26

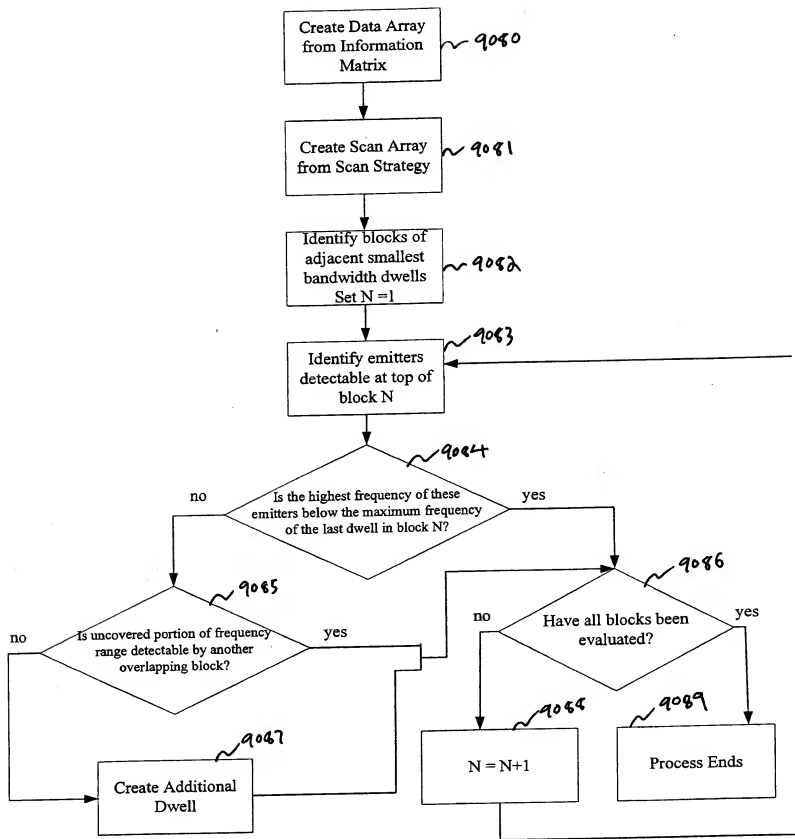


Figure 27

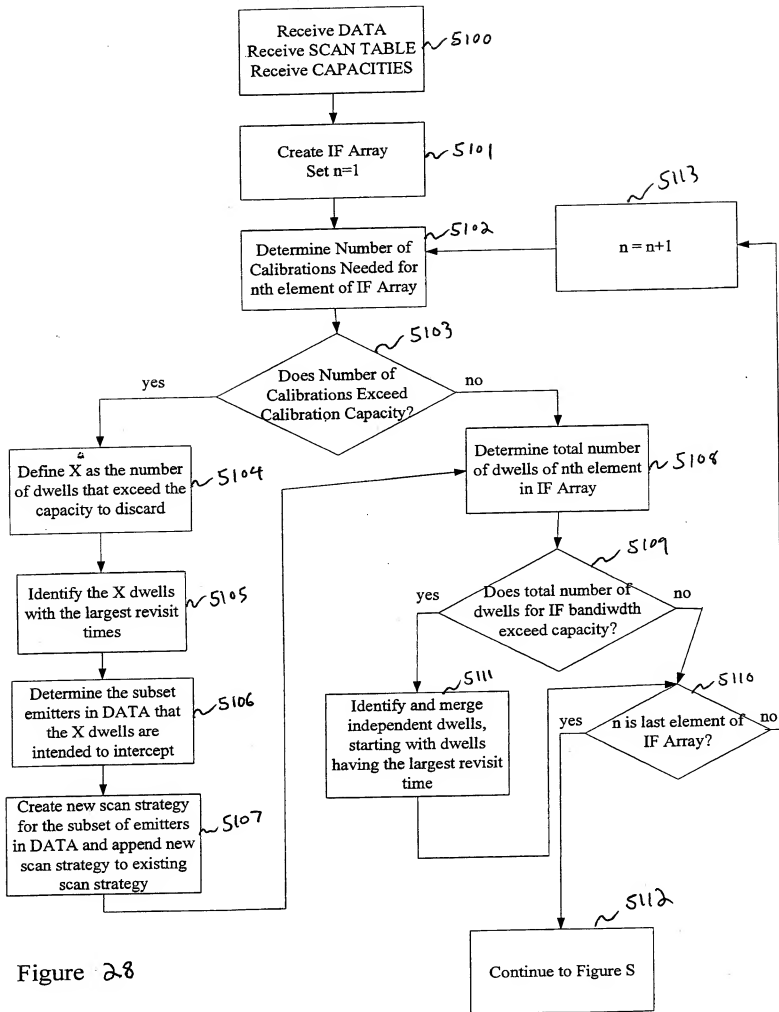


Figure 28

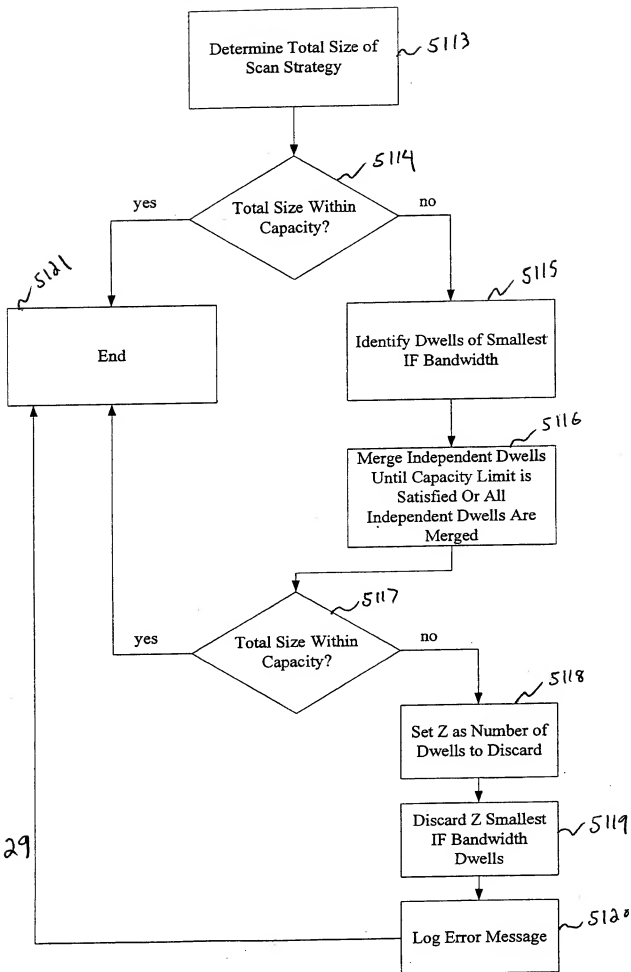


Figure 29

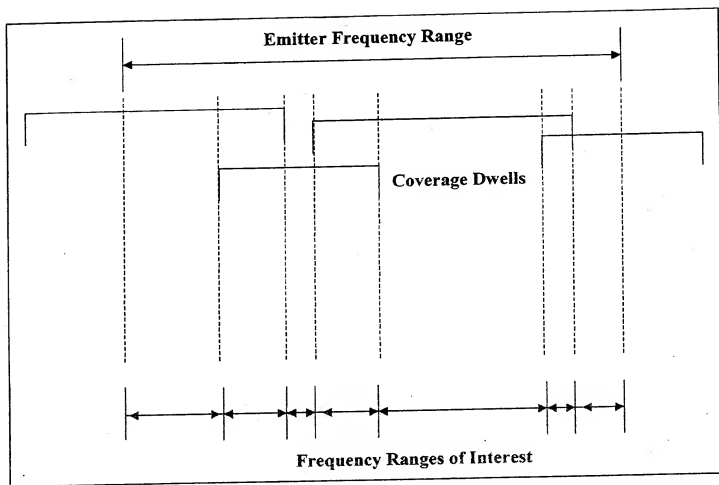


Figure 30

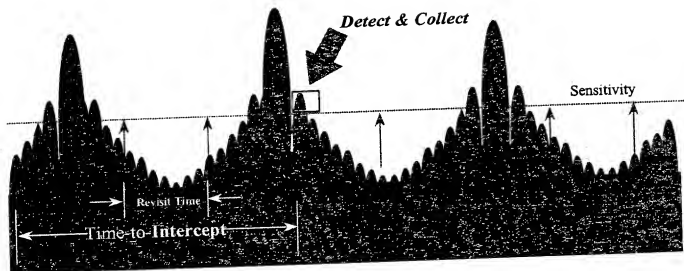


Figure 31

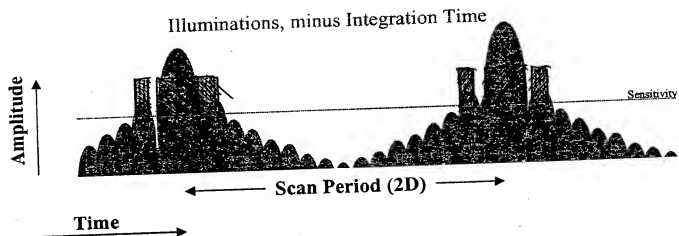


Figure 3d